

Using OAGis BOD GetItemMaster For Product Data Queries

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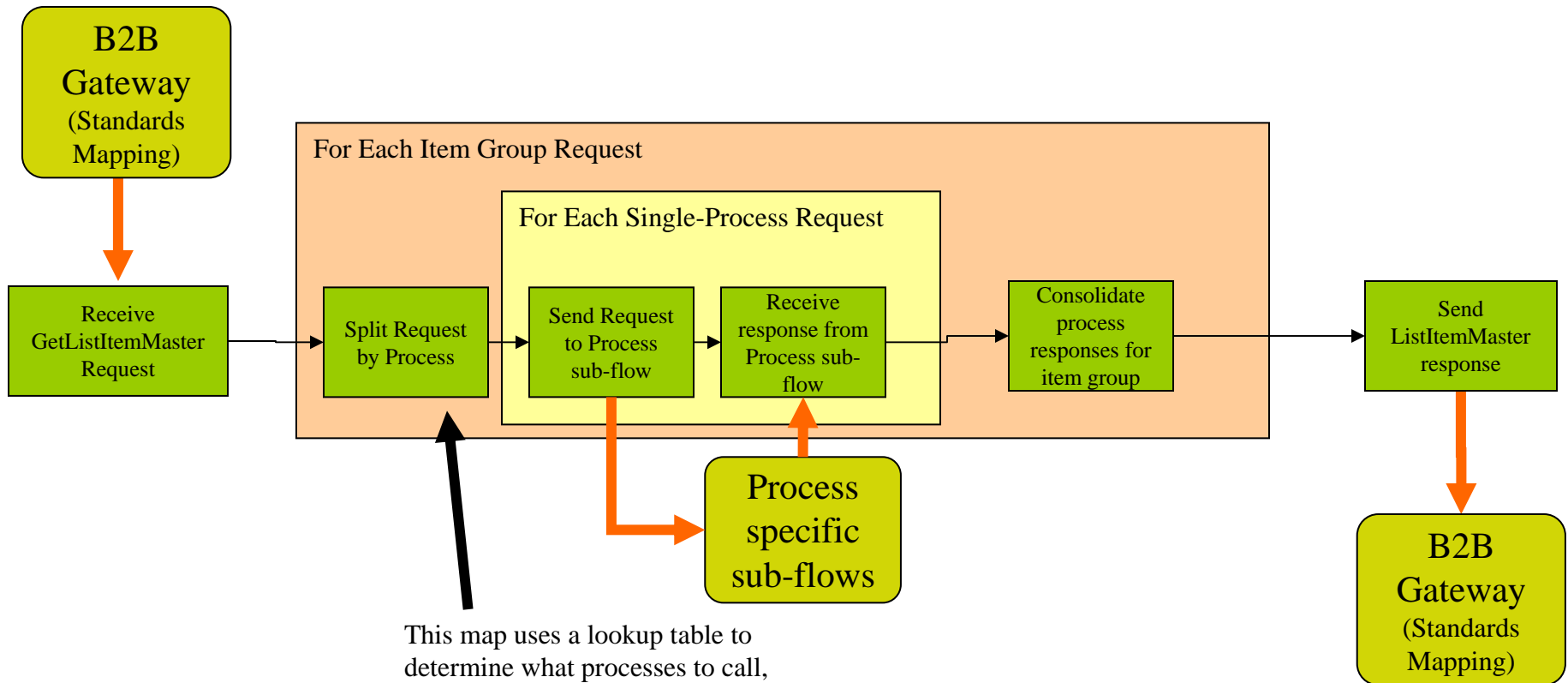
Business Problem

- As company automation is maturing, the trend is moving from transactional to informational automation
 - Customers are requesting a variety of data types
 - Export Compliance
 - Parametric
 - Material Content
 - Etc.
 - Abstract various formats of B2B requests
 - CSV file via email
 - RosettaNet 2A9, 2A10, and 2A13 PIPs
 - Etc.
- **Business Goal:**
 - Provide a common service that can be used for B2B request/response and publish/subscribe push to customers
 - Support expanding sets of item attributes
 - ECCN/HTS codes
 - NAFTA certificate
 - **Material Composition**
 - Etc.
 - Support for various source systems
 - No single master source for all item attributes
 - Support queries for specific subsets of attributes

Solution

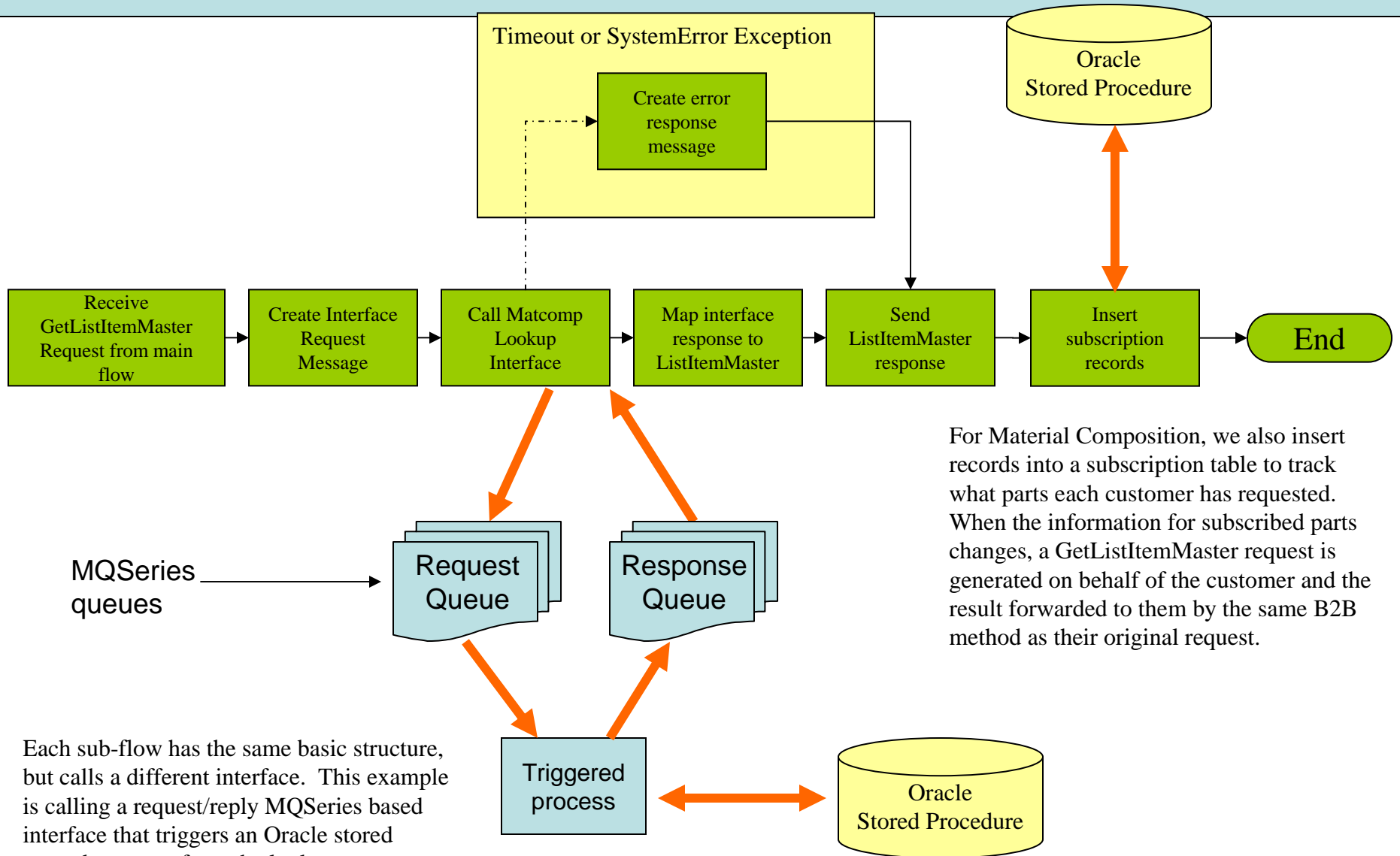
- Implement standard service in **SAP Exchange Infrastructure (XI) Cross Component Business Process Management tool** for Item Master information using the Open Application Group's (OAG) Business Object Documents (BOD)
 - OAGIS 8.0 Standard
 - GetListItemMaster (request)
 - ListItemMaster (response)
- Create a main process flow for the service that calls sub-flows for each attribute set
 - Sub-flows to be called determined at runtime based on attributes requested in the "ReturnCriteria" element of the GetListItemMaster
 - Use RosettaNet RNTD names where appropriate
 - Material Composition is requested as a single attribute (RJS001-001)
 - Expansion of supported attributes requires non-invasive development – new sub-flow and additional receiver determination rules

Main Process Flow



This map uses a lookup table to determine what processes to call, based on what item properties are being queried. When a new process is to be supported, an entry is added to the table, a new sub-flow is developed, and the sub-flow is set up as a receiver in the receiver determination.

Material Composition Sub-flow



For Material Composition, we also insert records into a subscription table to track what parts each customer has requested. When the information for subscribed parts changes, a `GetListItemMaster` request is generated on behalf of the customer and the result forwarded to them by the same B2B method as their original request.

Each sub-flow has the same basic structure, but calls a different interface. This example is calling a request/reply MQSeries based interface that triggers an Oracle stored procedure to perform the lookup.

GetListItemMaster example

```

<?xml version="1.0" encoding="UTF-8"?>
<n:GetListItemMaster xmlns:n="http://www.openapplications.org/oagis" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.openapplications.org/oagis GetListItemMaster_TI.xsd" environment="Production" revision="8.0" lang="en-US">
  <ApplicationArea>
    <Sender>
      <LogicalId>B2BGateway</LogicalId>
      <ReferenceId>25204535.024353</ReferenceId>
      <Confirmation>Never</Confirmation>
    </Sender>
    <CreationDateTime>2005-03-18T09:30:47.0Z</CreationDateTime>
    <BODId>1234567890ABCDEF987</BODId>
    <UserArea>
      <EmailAddress>cfowler@ti.com</EmailAddress>
      <EmailSubject>Material Composition Request</EmailSubject>
      <CustomerLocation>SPK</CustomerLocation>
    </UserArea>
  </ApplicationArea>
  <DataArea>
    <GetList confirm="Never" list="Always">
      <ReturnCriteria>
        <SelectExpression>RJS001-001</SelectExpression>
      </ReturnCriteria>
    </GetList>
    <ItemMaster>
      <Header>
        <ItemId>
          <Id>LM2902PWR</Id>
        </ItemId>
        <UserArea>
          <customerNumber>1234567890</customerNumber>
          <customerPartNumber>9876543</customerPartNumber>
          <customerPartRevision>A</customerPartRevision>
        </UserArea>
      </Header>
    </ItemMaster>
  </DataArea>
</n:GetListItemMaster>

```

ListItemMaster Example

- See attachment

Benefits

- **Supportability**
 - Able to use an industry standard service definition
- **Reusability**
 - Service can be used both by the B2B environment to respond to queries and by internal system to push data out to subscribers
- **Expandability**
 - Support for new sets of attributes can be easily added by plugging in a new sub-flow that executes the necessary interfaces to gather the attribute values
 - Available to all TI regional Sales organizations for any Customer

Summary

- TI is in full production with this solution today
- We are looking for more Customers to migrate to the use of the RosettaNet 2A Series PIPs for Material Composition Reporting and Export Compliance Data
 - Automatic subscription service for content changes
- The exchange of Supplier Parametric Attributes will be the next 'big' B2B trend